



Internship Report: "The Financial Effect of 'Beetles' on Big Web Technologies Limited"

Submitted by:

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Submitted to:

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Post: Lecturer

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Institution: BRAC University

Approval Letter

This is to certify that Md. Muqtadir Ullah, Student of Bachelor of Business Administration (BBA) under Department of BRAC Business School, BRAC University, Bangladesh, has successfully completed his assigned Internship Report , “The Financial Effect of ‘Beetles’ on Big Web Technologies Limited”, at the Big Web Technologies Limited.

Despite being under company’s strict rule of six working days a week, he has worked diligently to complete this task while at the same time fulfilling his role in the company. Even though he is just starting his career, I hope his hard work and determination will one day propel him towards success.

The ‘Internship Report’ which he has submitted on the topic, is up to the mark in the terms of the quality and the organization.

I wish his every success in life.

Supervisor

Monzur Hossain Chowdhury

Chief Operating Officer

Big Web Technologies Limited

Date: 11/04/2017

Letter Of Transmittal

Ms. Tanjina Shahjahan

Lecturer

BRAC Business School

BRAC University

66, Mohakhali, Dhaka 1212, Bangladesh

Subject: Letter of Transmittal

Dear Madam,

It is a tremendous honor for me to be provide you with the internship report on Big Web Technologies Limited. This report is the result of the cumulative knowledge which has been collected from BRAC University's academic courses, real life scenarios and my short-time career at Big Web Technologies Ltd.

I poured my heart and soul into assembling this report. The information found in this report is collected from a mixture of interviews, company documents and internet articles.

I earnestly believe that this report is worthy enough to be studied by you. Please do not hesitate to conduct any query or if you want me to clarify anything. Again, I sincerely hope that you will acknowledge my arduous work and overlook any minor blunders. Thank you for keeping up with my faults and giving your full cooperation.

Sincerely,

Mohammad Muqtadir Ullah

13104061

BRAC Business School

BRAC University

Acknowledgment

First and foremost, I would like to convey my most humble gratitude to almighty Allah for providing me the willpower and the physical strength to complete my BBA courses and assemble this internship report within the appointed time.

Secondly, I am eternally grateful to my supervisor, the person without whom this report would be impossible to create, Ms. Tanjina Shahjahan, faculty and lecturer of BRAC Business School. Even though she was tightly pressed for time, she indulged all my foolish requests and persistent complaining and tutored me about all the required internship procedures, from the start of internship period till the deadline. Her valuable advice, unending encouragement and unwavering faith in me gave me required understanding into the research problem and helped me create a meaningful work. Without her heartfelt support, I would most certainly have failed to finish this report in a timely and fitting manner.

Also, a special gratitude to, Monzur Hossain Chowdhury, my supervisor and COO of Big Web Technologies and Md. Muqeeet Halim, my co-supervisor and Managing Director at Big Web Technologies. Both of them guided and assisted me benevolently and taught me the ins and outs of the corporate world, at least as much as I could comprehend. They kept me busy with a lot of work, for which I never felt boredom, but never let me get overwhelmed and never hindered me in any way to complete this report.

I am also grateful to my family, especially my mother, who has supported me during this transitional time of my life, my friends and colleague interns who never let me feel isolated and always encouraged me and the staff of Big Web Technologies, who have provided me with every information within their authority.

Finally, I would like to thank BRAC university to give me this opportunity to have a wonderful time during my undergraduate program and the chance to create this report.

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Abstract

This report was assembled with a mixture of interviews, documents research and an NPV analysis to figure out whether 'Beetles' was the best possible financial option to increase Big Web Technologies revenue. Beetles was the most financially sound option with others being software development and CRM platform implementation.

Executive summary

This Internship report provides a complete overview of Big Web Technologies Limited including its history, organizational view and company's structure, its products and services and my daily tasks and reflections during this internship period.

This report also provides an analysis and evaluation of the current and future financial estimation of multiple projects of Big Web Technologies Limited. The method of analysis was NPV analysis. Other calculations include current company's expected rate of return to put as opportunity costs of doing projects. All calculations can be found in the appendices. The data analysis shows, that even though the company is performing poorly, implementing 'Beetles' can greatly increase the financial condition of the company.

The findings suggested that the current prospects of the company is not positive which is expected as the company has only started 2 years ago. The most important problems which could be rectified are given with recommendations below:

1. Creating a proper financial projection including all measurable risk factors
2. Comparing it to other companies in the industry
3. Making key changes and technological substitute to make up for inadequacy

The report had its limitations due to no unavailability of proper financial reporting, restriction to company's information and time constrain.

Introduction

1.1 History

Established in 1991, Aziz Foods Ltd is the sister concern of Aziz Pipes Ltd. From the very beginning, this brand has been synonymous with the name “Chocolate” in our country with the very famous Aziz ‘Mimi’. They have been conducting business and marketing products which have been proven safe, hygienic and of utmost quality for the last 26 years. A very renowned company in Bangladesh, they have been in the lead of the domestic markets chocolate products. Initially the company started by manufacturing only a single brand/type of chocolate. However in 2003, The company was totally revolutionized when it was reorganized and given over to a new management. Consequently, they have been started utilizing latest chocolate manufacturing machines procured from Macintyre, UK and assorted companies in Taiwan and India. Currently, Aziz Foods Ltd. produces three distinct types of whole-bar and general tablet chocolate, puffed rice and their unique invention, “Chocolate coated puffed rice”. By boosting their manufacturing and management capabilities via continuous technological modification, strategically adroit acquisitions and constant product research and development, Aziz Foods Limited has grown magnificently.

Founded by the managing director of Aziz Foods ltd., Md. Muqet Halim, Big Web Technologies Ltd is a promising IT services company that is determined to present businesses with ingenious technological ideas, exceptional services and trustworthy solutions by adamant market research, technological visualization and out-of-the-box thinking of multiple scenarios. Since it’s inauguration in 2015, Big Web Technologies Ltd has propitiously acquired Multipoint Solution, an organization consisting of over 10 years of experience, and has sealed its position in the IT services industry, solutions providing and more.

1.2 Nature of the Organization

1.2.1 Culture

Big Web Technologies Ltd. is a private firm run by a group of individuals with extended interpersonal relationship, a dynamic team possessing comprehensive experience, both internationally and domestically and are committed to provide: service on-site and off-site, 24.7.365, ensuring consumers' complete satisfaction.

1.2.2 Mission Statement

Enhancing the business operations of its clients by developing and implementing premium IT infrastructure solution, services and products, all the way providing our clients value for their money and delivering complete satisfaction.

1.2.3 Goals

- I. Big Web Technologies Ltd envisions to be the chief of one-stop, go-to IT services company which provides top class framework solution, cyber security, IT services and technological products.
- II. Conquer local IT market and subsequently be established in the global market as well.
- III. Creating a loyal customer pool rather than going for the mass population's market.

1.3 Company Characteristics

Big Web Technologies strives to achieve perfection in their work and at the same time satisfy their customers. Some additional characteristics are mentioned below:

1. 24/7 service providing commitment
2. Customized software developed and maintained internally
3. Team member experienced with big companies like Google, Microsoft, Slack, Synack, Cobalt and more
4. Common vision and shared values of IT threats and potentials
5. Challenging initiation process
6. Close and trustworthy relationship among all members
7. Highly adaptable and flexible decision making members

1.4 Identity

Big Web Technologies Ltd is an up and coming IT services company that is committed to provide your business with innovative idea, services and solutions through unyielding industry research, technological visualization and out-of-the-box pioneer thinking.

1.5 Values

Big Web Technologies Ltd. has a few strict values they adhere above all else:

1. **Accountability:** The Company members acknowledge and assume complete responsibility for their own actions, organization's products, individual decisions, and company policies.
2. **Integrity:** It is defined by being impartial and having sturdy moral principles. Every company employee, executive, board members and even stakeholders are always reminded constantly to keep their integrity intact to make their relationship with customers as strong as possible.
3. **Adaptability:** Adaptability can be boiled down to one question, how well does an individual handle ambiguity? The company members are always hired by judging their adaptability skills and further tested in the future to maintain and improve it. As a business in an ever-shifting technological industry, it is critical to have this value to keep running this business.
4. **Transparency:** An IT company with security solutions and vulnerability assessment must have their procedures and workings transparent. Consequently, every operational member of Big Web is instructed to keep the works and dealings as transparent as water.
5. **Crisis Solving:** Building a great company is about solving one problem after the next. If you can surround yourself with people that are excited to hop from one problem to problem you will achieve wonderful things.
6. **Innovation:** Winston Churchill once said, "To improve is to change, to be perfect is to change often". That is why Big Web is obsessed with pursuing new creative ideas that have the potential to change the world.
7. **Ownership:** It is one thing to work for someone and one thing to work with someone. Having a sense of ownership over your company and your work can

help increase productivity to a great extent. The company has the policy of taking care of the company's assets and customers as they were one's own.

1.6 Company Image

The Image of Big Web Technologies Ltd. and their parent company Aziz Foods Ltd. is defined by various testimonials given by their partners and many other corporations.

“They have found vulnerabilities in our systems which local cyber security companies, couldn't. Truly remarkable when you think about what they do for less than half the price” - Hyper Webbers CEO, John Brown

“Their services cannot be found anywhere in the nearby countries, cyber security is a big threat and I'm glad someone is taking necessary measurements against it”- Ofisxpert Finance head, Nadia Wahab.

Service and Market

2.1 Service:

As mentioned before, Big Web Technologies Ltd is one of the ICT company in Bangladesh with great potential to take over the industry. Being a member of BASIS, (Bangladesh Association of Software and Information Services) they are committed to provide their partner businesses and customers with innovative idea, services and solutions. Its services include:

1. Framework Solution
2. Consultancy about Business Software & Technologies
3. IT Security and Consultancy
4. Software and Web-Based Application Design and Development
5. E-Commerce Platforms
6. Customizable Customer Relationship Management Software
7. Hosted Virtual Private Servers Rental and 24/7 Maintenance
8. E-Marketing (Social media)

One of Big Web Technologies greatest achievement has been successfully developing and launching, the very first time in Bangladesh, a vulnerability assessment and penetration testing (VAPT) platform, named Beetles. Beetles has been developed and maintained by one of the most versatile young cyber minds of our country and it provides:

1. Auditing of Source Codes
2. Assessing Vulnerability and Penetration Testing
3. Virus protection and eradication
4. Defensive Mechanisms against Hacking
5. Block list Removal
6. DDOS Protection

2.2 Market Position:

Big Web Technologies Ltd. has its market positioned in the business-to-business/corporate market. Top level of service including periodical maintenance, response time, large database, swift solution are highly expected by this market which also demands elite quality in terms of execution and customer relationship.

The target markets for Big Web are primarily sectors in:

1. Businesses
2. Institutions (Schools, Universities, hospitals)
3. Governmental Organizations

2.3 Target Group

Big Web Technologies focuses on a few target groups, some of their attributes are written below:

CEOs

- ✧ Age range 30-50
- ✧ Open minded about new ideas
- ✧ Total range 1500-2000
- ✧ Has higher education/decent idea about recent technology
- ✧ Concerned about cyber threats and what consequences company would suffer

- ✧ Active and passionate about his job
- ✧ Wants to leave a proper legacy

IT Managers

- ✧ Age range 25-40
- ✧ Looks for innovative ways to fortify the company's system
- ✧ Total range 3500-5000
- ✧ Has higher education or diploma in Information and communication tech
- ✧ Wants to stabilize and improve position in company
- ✧ Motivated to protect information
- ✧ Aware about world security threats
- ✧ Company is willing to purchase on his/her recommendation

Entrepreneurs

- ✧ Age range 22-35
- ✧ Runs new and/or up-and-coming businesses with great potential
- ✧ Total range 4000-6000
- ✧ Has higher education
- ✧ Willing to consider persistent security threats regarding IT
- ✧ Interested in improving the community and industry
- ✧ Spends a good amount of time researching and learning about new things
- ✧ Company revenue over 500,000tk per year

2.4 Competition list


Even though, cyber security is not a big market in Bangladesh, ICT companies are numerous. As a result, Big Web has some fierce competitors. Some are listed below:

- I. **IBCS-PRIMAX Software(Bangladesh) Limited:** Bangladesh business directory states that they (IBCS) offer, “Offshore and onshore customized software development, Enterprise Application development, Application Migration solutions, IT Consulting, Oracle Data Warehouse (DW) and Business Intelligence (BI) Solution, Testing and Quality Assurance, ICX and IGW billing solution, Support and Maintenance and more.”
- II. **LeadSoft:** According to themselves, “LeadSoft is a leading Software Development Company, offering custom software development, software products, offshore software development, professional outsourcing and software consultancy. Serving ISVs and SMEs covering Banking Sector, Non-Banking Financial, Life Insurance, Pharmaceuticals. Established in 1999, LeadSoft Bangladesh Limited has been delivering software products and services to nearly 100 clients at 500+ sites in Bangladesh, Japan, Denmark and Norway.”
- III. **Tiger IT Bangladesh:** Tiger IT has this to say about themselves, “It’s been 10 long years that Tiger IT has been contributing in the IT sector of the country. They possess vast experience in developing numerous apps and games along with few government projects. They are one of the leading software companies of the country to deploy the Bio-metrics system and Automated Fingerprint Identification System (AFIS). They are one of the few companies worldwide to develop an NIST certified AFIS, and the first among the South Asian countries.”

IV. **Southtech Limited:** In the website they introduced themselves by saying, “Southtech Limited is one of the largest ISO 9001:2008 certified (by URS, UK) and SEI-CMMI L-3 appraised (by KPMG) software companies in Bangladesh. They are a Gold Certified Partner of Microsoft and a Gold Partner of Oracle. They were included in Dun & Bradstreet’s 2010 Directory of the Top 500 companies in Bangladesh. Very recently, they have been recognized as one of the ‘25 Most Promising Banking Technology Solution Providers 2016’ by prestigious APAC CIO outlook magazine.”

2.5 SWOT Analysis

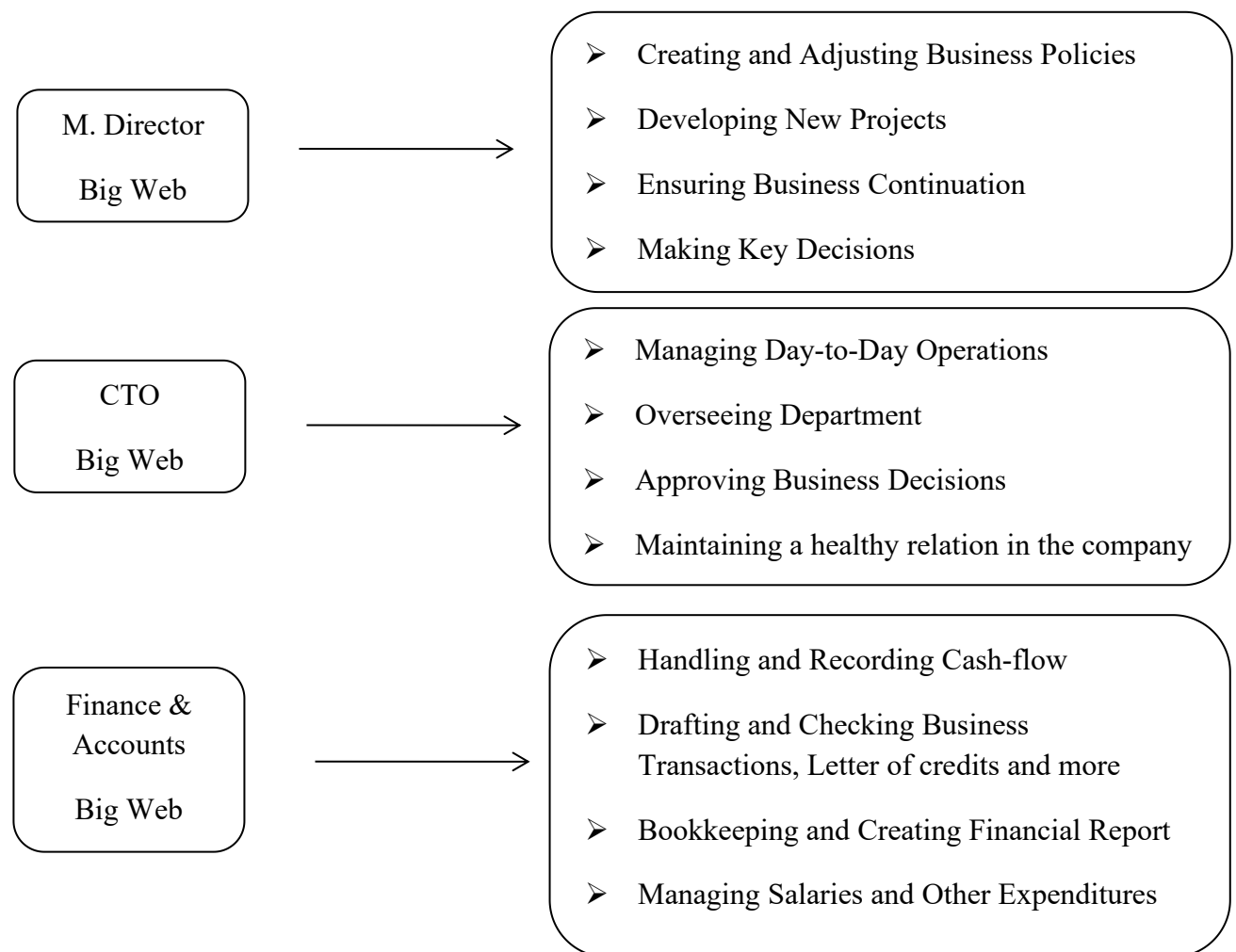
Big Web Technologies has its strengths and weakness as well as some potential opportunities and upcoming threats. These are discussed below:

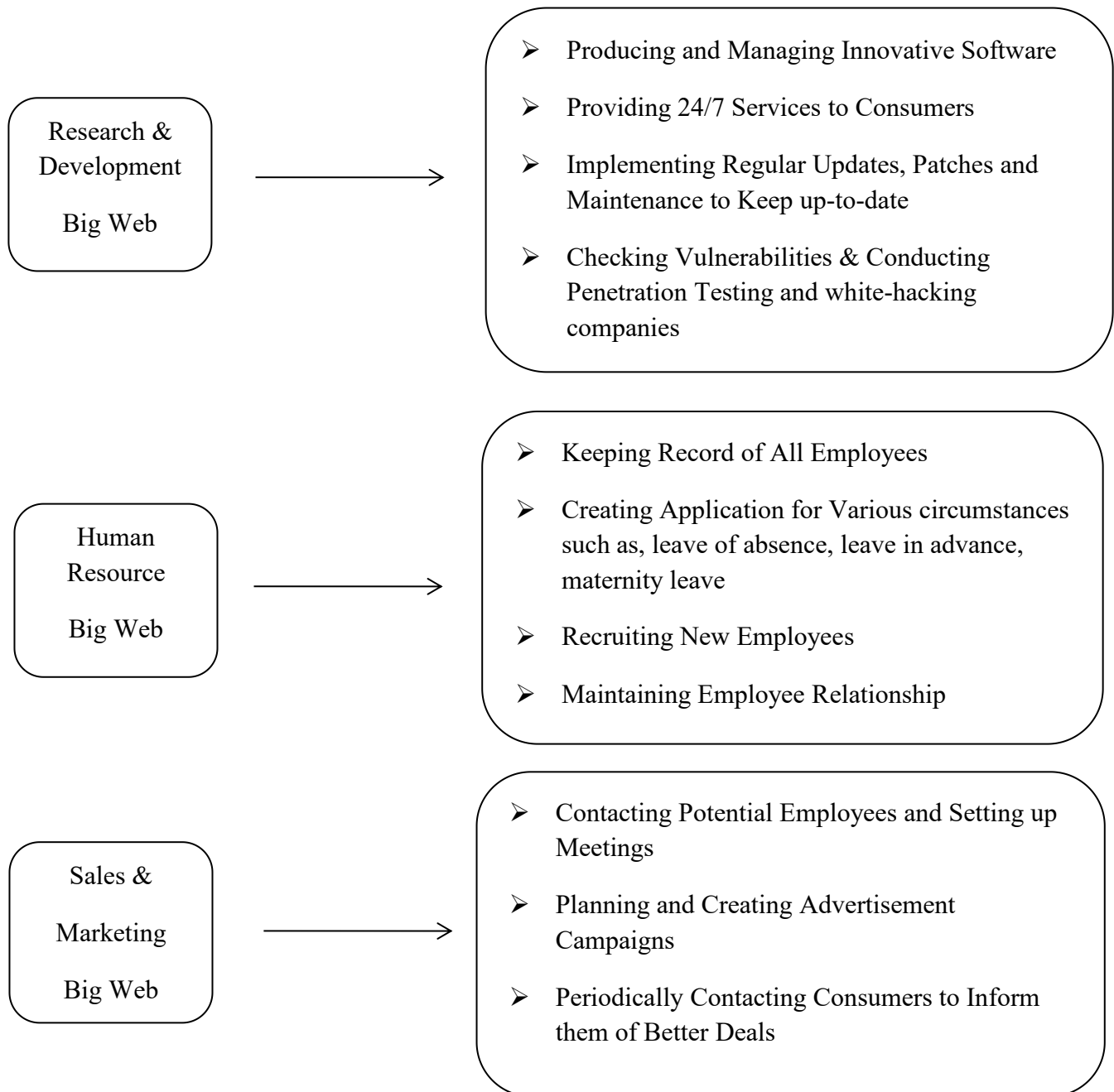
<p>SWOT ANALYSIS</p> 	<p>S Strengths:</p> <ul style="list-style-type: none"> I. Expert team of highly experienced individuals II. Offers rare and unique IT services in all of Asian region III. Creates platform based service for cloud usage IV. Manufactures highly customizable softwares V. Contemporary Technology 	<p>W Weaknesses:</p> <ul style="list-style-type: none"> I. Shortage of manpower II. Lack of media coverage III. Industry not established yet
	<p>O Opportunities:</p> <ul style="list-style-type: none"> I. More and more companies are steadily becoming concerned about cyber threats II. Recent events and more hacking incidents will make organization seek cyber protection 	<p>T Threats:</p> <ul style="list-style-type: none"> I. ICT companies with more resources might replicate unique services II. Employees might turnover if offered a much higher level of salary

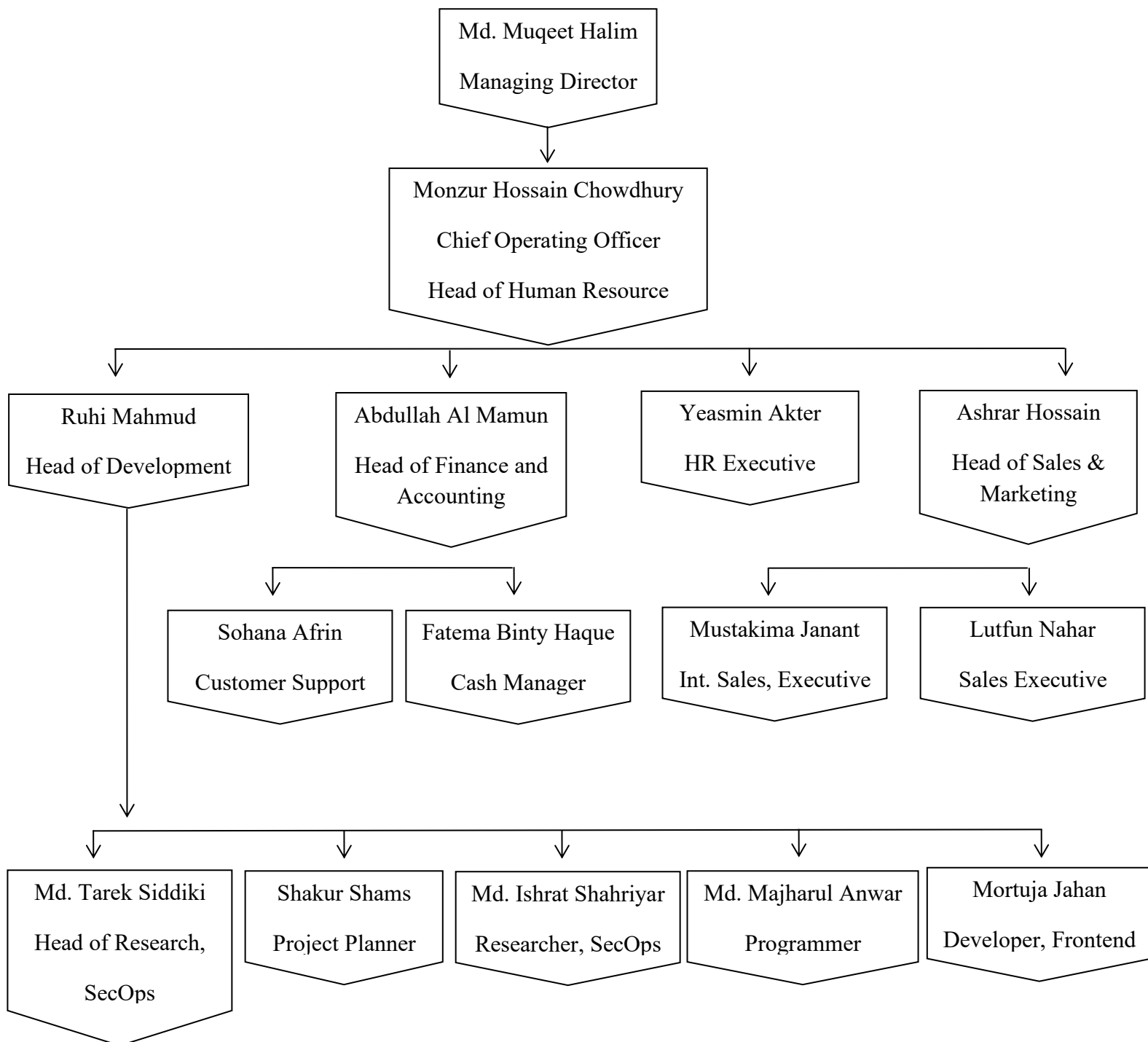
Organizational Structure & View

3.1 Structure

Big Web Technologies was founded by its Managing Director, Md. Muqet Halim, who mainly participates in setting goals and strategies and overseeing different projects. It's Chief Operating Officer, Monzur Hossain Chowdhury, manages all day to day operations and oversees all departments. Big Web has a Finance and Accounts Department, a Human Resource Department, a Sales Department, and Research and Development department.







ORGANOGRAM OF BIG WEB TECHNOLOGIES LTD.

3.2 Organizational View

Big Web Technologies is founded on a few of ideas and views of famous personalities in the trade and organization history. The most important one is, Henry Fayol's General Management Theory. Fayol had a general theory on how an organization should be managed, he pointed out six areas:

A) Managing:

1. Control/check
2. Coordinate
3. Organizing
4. Commanding

B) Bookkeeping

C) Self-protection (security)

D) Finance

E) Commerce

F) Technical

Big Web's working process is centered on these six control areas and are regularly implemented during planning process. Other mindsets and views that Big Web can be based on is the one of Mintzberg. Mintzberg describes that an organizational structuring and strategic planning company must have a clear structure and must be guided by a long-term vision. Another is the one of Tom Peters and his business management principles where a company should have:

I. Simple structure

- II. Central and decentralized leadership
- III. Do what they do best
- IV. Driven by values and beliefs
- V. Action orientation
- VI. Maintaining relationships with customers
- VII. Creation of autonomy and entrepreneurship

Big Web is an organization with service and development at its core. The structure and the work process within the company are simple and clear. Big Web is a miniature organization and possessing a simple structure. This is a result of Big Web having only a single founder not a lot employee. The structure of Big Web is based on direct supervision. Coordination mechanisms have as much to do with communication as with coordination. Henry Fayol General Management Theory explains the fundamental ways in which organizations coordinate their work, as well as for Mintzberg and Tom Peters.

Internship Tasks & Learning

4.1 Daily Tasks

During my internship at Big Web, I have been assigned to numerous tasks, projects and activities. Big Web projects and activities can be broken down to regular tasks that involve daily office work, and the on-site activities that have to be carried out at the actual events.

Daily tasks and activities (routine):

1. Manually inputting and adding contacts to Zoho CRM
2. Writing content material about projects and websites
3. Setting up meetings for potential customers of the Beetles project
4. Editing and proof checking various documents
5. E-mailing letters and deals to clients and partners
6. Assisting in digital marketing programs.
7. Creating brochures for different Big Web programs
8. Assisting in creating financial statement

4.2 Reflections and Learning

My time at Big Web Technologies has taught me a great many things, not only about business but also about corporate life and how I should pursue it should I wish to. Some are listed below:

- I. **Technical Skills:** Working as an intern helped me gain proficiency in a lot of technical aspects of business. Most notably, working with spreadsheets like Microsoft excel and content writing.
- II. **Interpersonal Skills:** Being an intern, I had to communicate with almost every employee in the company. My supervisor also assigned me to a lot of day to day activities which allowed me to converse with high-ranking executives to general interns like myself. Also, working in the sales department helped me get a general idea on how to approach other companies as a representative of a company.
- III. **Corporate Knowledge:** The corporate workings is quite different from what we study in the text books. Each company has its own setting and getting adjusted might be difficult. As an example, Big Web Technologies has a profound R&D department and Human Resource department but their finance department is non-existent. It took me a while to adjust with this changes from generic ideas.
- IV. **Industry and Market Knowledge:** As I conducted my day-to-day tasks in Big Web I gained a distinct idea about the ICT market and cyber-security market in Bangladesh. I picked up this knowledge by overhearing conversations and studying some related company documents. I also gained some knowledge about the competition, as an example, Big Web has a lot of competitors in the ICT market but almost monopolizes the cyber-security market as it is realistically non-existent in our country.
- V. **Corporate Ethics:** Finally, my most important learning was learning the corporate culture in our country as well as some intentional aspects of it. Generally, in modern times customers are more important than ever, and the first priority is always making sure products or services or both are designed in such a way that it pleases the customers. Also, integrity and punctuality is another key aspect in business culture, especially for new comers if they are to earn their places in organizations. Overall, without adhering to these ethics, it is very hard work and fit in corporations.

Project: Financial Prospects' NPV Analysis

5.1 Introduction of the Project

In recent times, cybercrime has become a major issue in our social life. As time goes by, more and more aspects of our society are being integrated to technology and inevitably, to the internet, the age of the Internet of Things (IoT). From refrigerator, light bulbs, air conditioning, security locks, cars to complex bank accounts, classified documents, business secrets, all can be accessed by internet. To tackle these problems, programmers have gone through various steps to ensure that the hacking can be stopped. However, time and again it has been proven that it is only a matter of time before hackers can eventually access our most clandestine operations. Therefore, they had to invent a new method of protection which is known as cyber security. It is an amalgamation of technological security on websites, computers, databases, storage, networks as well as training of the human factor such as, employee awareness, preventive training and so on.

Mostly, in the Asian region, people know cyber security as anti-virus or anti-malware protection systems and software. While they are not completely incorrect, these factors are only a small part in the overall threat that cybercrime brings to the society. There are threats such as phishing, ransomware, hacking into databases, creating backdoors and loopholes into your system, planting timed malicious programs and much more. Companies or individuals simply possessing preventive software like anti-viruses are not enough, not anymore at least. So, to have a fully comprehensive cyber protection, Big Web has developed a security platform known as 'Beetles'. This is a web based service platform which can help users have their software audited to see whether there is any problem in it; to conduct vulnerability assessment and penetration testing to see what security vulnerabilities the system possesses and emulates how the hackers can break into your security system and do what degree of damage; to operate end point forensics which is done after hackers affected your system to see what they did exactly and how much damage they have caused; these as well as more critical issues are being addressed by 'Beetles' and its team members.

This program retains some security functions which are not used anywhere in the South-east Asian region and beyond. So, it gives a very powerful competitive advantage against other companies in the industry.

My research will be about whether ‘Beetles’ has changed the overall revenue of Big Web Technologies Ltd. and by how much. Other measures such as software development and implementation of CRM software which Big Web can potentially take and how those will affect the company’s revenue. Finally, I want to make a comparison among them to see which is the best one.

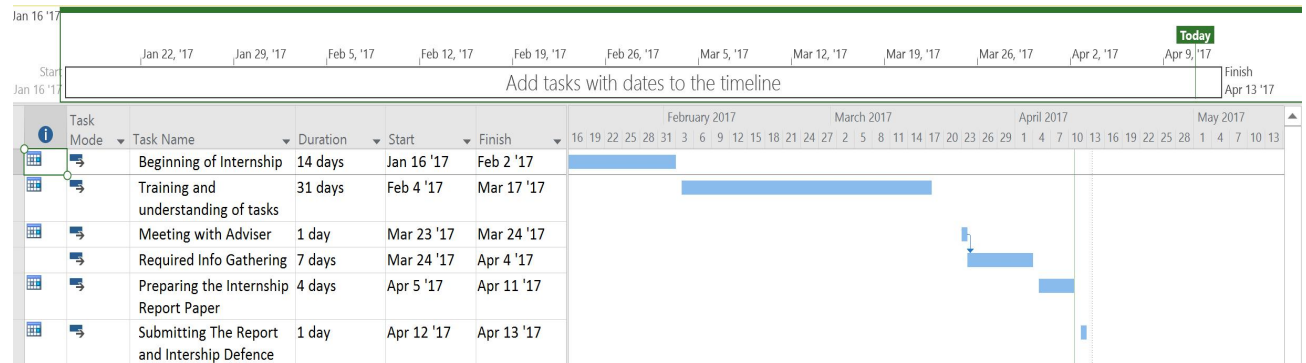
5.2 Problem Statement

Big Web Technologies Limited has been suffering losses in their business for the past two years. Even though they are a starter company, their financial problems projected to be negative for an additional three or four years. To prevent turn this problem around and earn some profit, Big Web Technologies Ltd. has planned to take drastic measures and put in some projects, which the industry has not been introduced to yet. Among these are the ‘Beetles – The Hacker’s Approach’ cyber security project, the CRM platform project, BigCRM and ‘Springboard, Query Management Board and Exodus, a Secret Project’ projects which are hosted software to improve business functionality like bulk messaging and controlling social media feeds, among others.

5.3 Purposes of the Project

- I. This project shows an NPV analysis of three different potential projects by Big Web Technologies Limited.
- II. The result shown in the project will determine which path will Big Web Technologies take.

5.4 Timeline



This timeline figure represents the total period of my internship starting from January 16, 2017, the beginning of my internship to April 13, 2017, the submission and defense of the internship project report. The timeline includes:

- I. Beginning of internship for 14 days, starting from January 16 - February 2
- II. Training and task understanding, from February 4 - March 17
- III. Meeting with adviser on March 23
- IV. Gathering necessary information, from March 24 - April 4
- V. Preparing the report, from April 5- April 11
- VI. Submitting and Defense on April 12

5.5 Limitations

Because of certain restrictions and shortage of time which naturally comes with internship I was limited to some factors which could have made this project more credible. Some are listed below:

- I. As a student I have no previous experience in the practical research filed, this limited my thought process and hindered a proper approach to conduct the research.
- II. Internship itself requires 8 hours work, 6 days a week in a company. This limited my time frame to conduct a research properly
- III. Access was limited to some of the company's financial information which is not very uncommon for these types of external researches.
- IV. Financial journals in Bangladesh are almost non-existent and therefore is extremely hard to get any idea about how financial systems in companies work.

5.6 Methodology

This research included participation from most of the employees at Big Web Technologies. In particular, both the chief operating officer, Monzur Hossain Chowdhury and the managing director, Md. Muqeet Halim, of Big Web technologies were participants multiple times and other participants including head of development, Ruhi Mahmud and head of accounts and finance Abdullah-Al-Mamun assisted tremendously as well.

The research was primarily done by gathering information via primary research methods, mainly interviews. Unfortunately, only two interview were recorded but there were a lot of informal interviews. Secondary research was also conducted by researching documents of the company's profile, financial statement and balance sheet. Finally, the research was conducted using an NPV analysis.

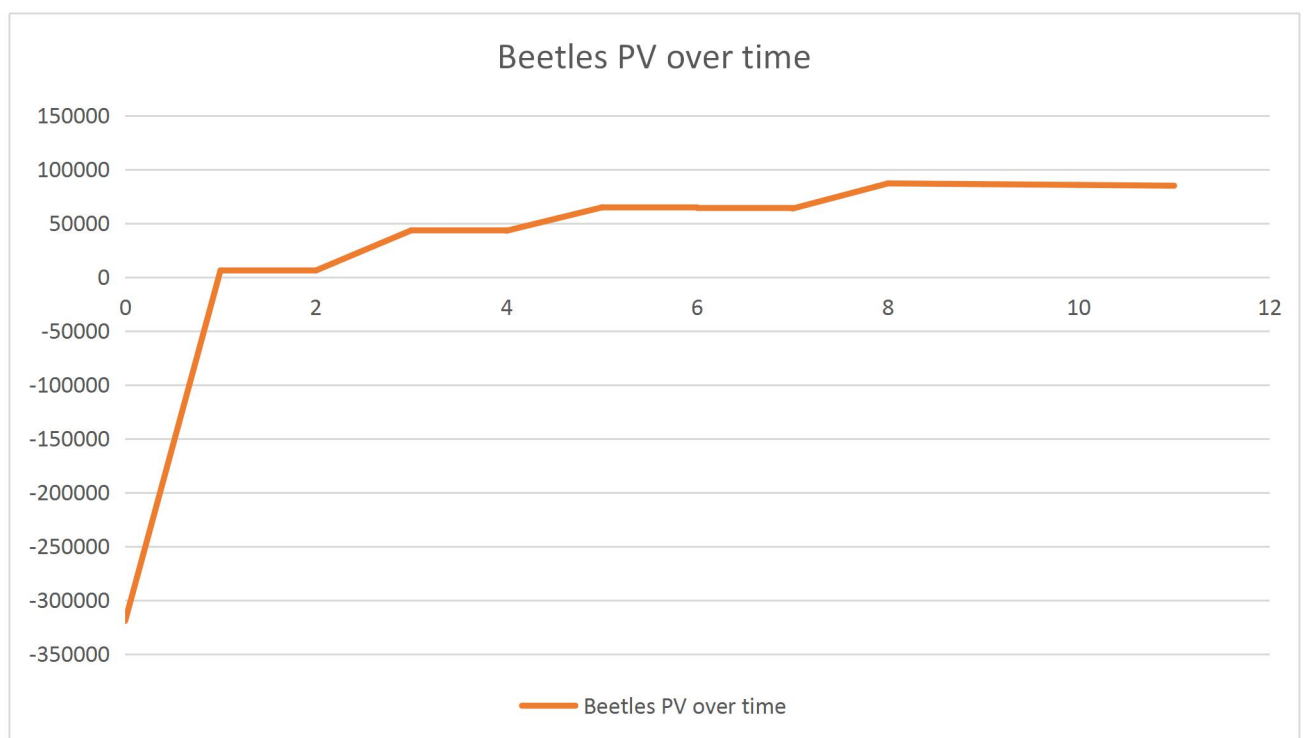
The financial statement and balance sheet of 2016 helped me formulate a projected income statement for the coming months in 2017. As the discount rate (opportunity cost) I implemented the company's policy of 10 percent return. First an NPV (Net Present Value) analysis of what would happen if 'Beetles' was implemented. Then I did the same for CRM platform and 'SpringBoard and Exodus'. Then I compared the three projects to see which yielded the highest NPV.

5.7 Hypothesis

“Among the 3 alternative and mutually exclusive projects of Big Web Technologies Limited, 'Beetles' yields the highest positive NPV”.

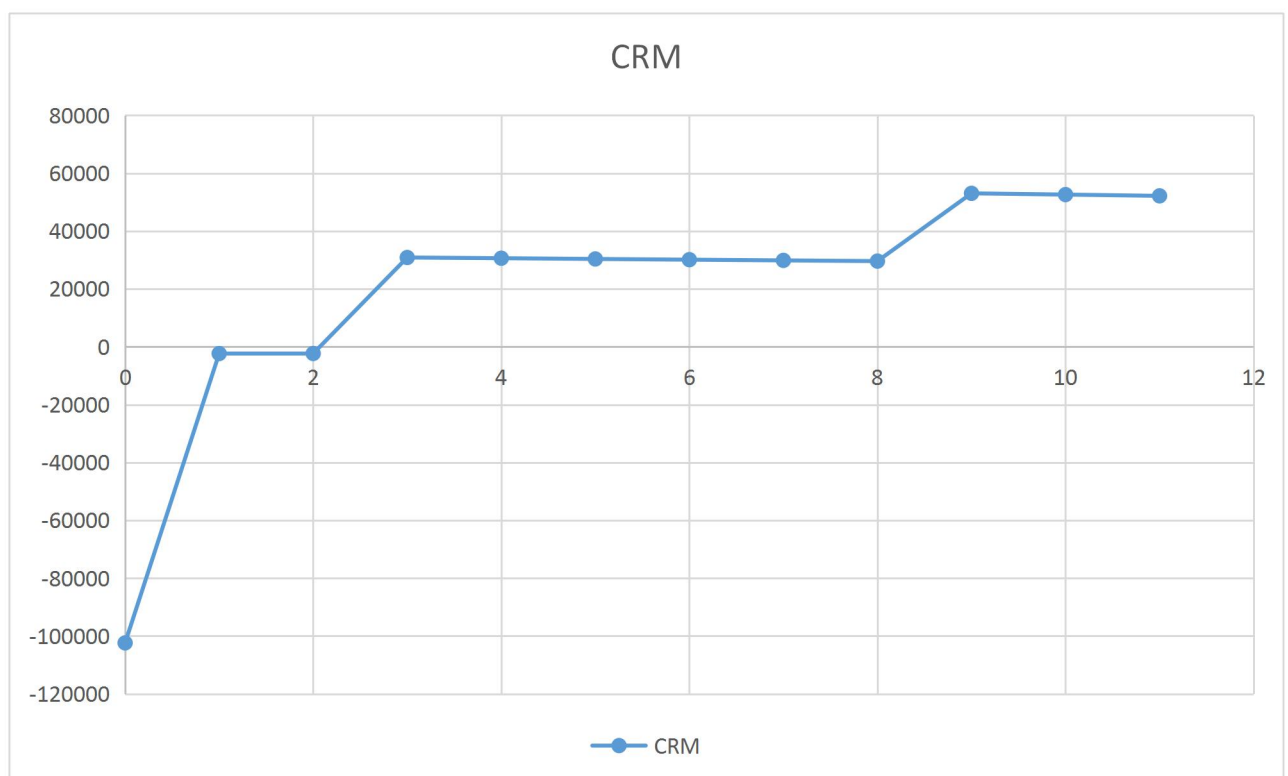
5.8 Calculation

Before implementing any of these three projects, Big Web Technologies had negative yield. However, that was due to the company just starting a few years ago. In order to get a projected financial statement I needed to have and estimate of how much Big Web will income and what might be their expenditure. So I took Data from all of 2016's income statement and averaged them. This gave me a crude estimate of their average monthly income and expenditure. Finally I had a framework I could calculate upon.



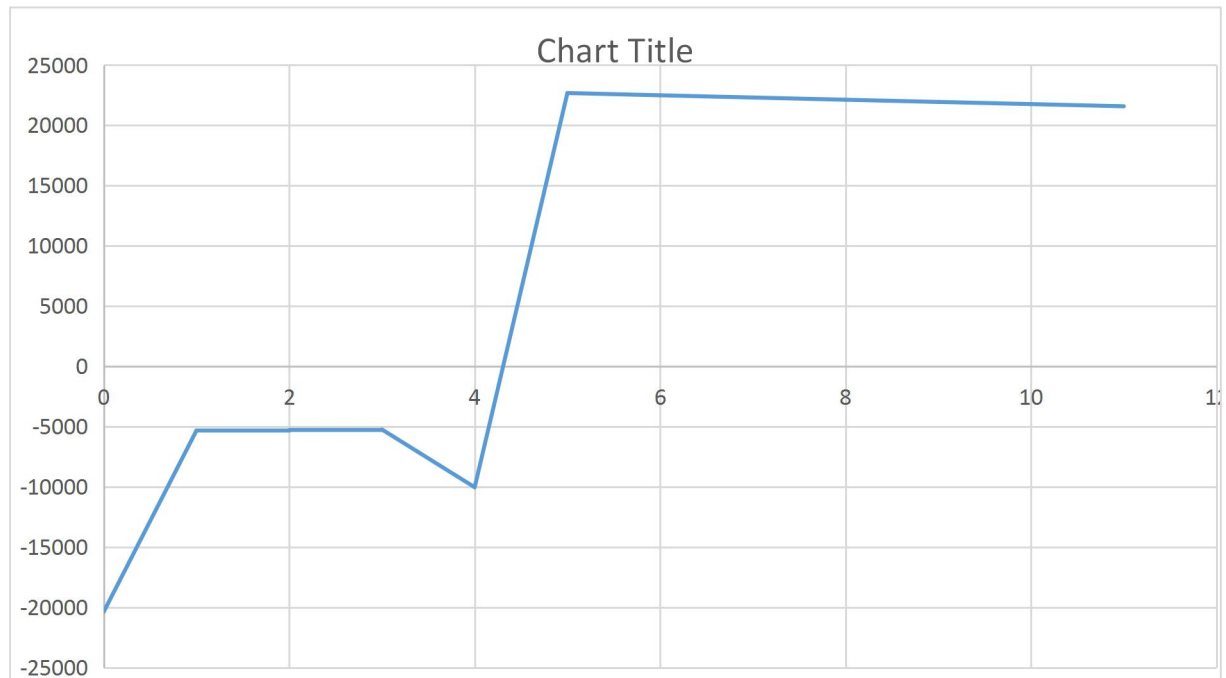
Big Web Technologies Limited had 3 projects which were mutually exclusive. So I had to do an NPV analysis of all three of them and then compare them. Firstly, to implement Beetles strategy, Big Web had to make an initial investment of 3,00,000

Taka for setting up a stall at technological fair and conduct additional marketing. Three companies were already interested in Beetles and Big Web is positively confident another company would also join the during the latter of the year of 2017. If the company invested in the project the other three company would subscribe to them. This would give Beetles additional income starting from February. It would be 30,000 Taka starting from February, increased to 75,000 Taka in April, to 1,02,000 Taka in June and finally, to 1,32,000 Taka in September. I input all these data to create a new cash flow with additional taxes on the additional income. The company has a policy of achieving a 10 percent return so it was set as a discount rate. Eventually, I calculated the present value of cash flows starting from January to December. Summing them all up gave me a Net Present value of implementing the 'Beetles' project. I also did made a graph comparing the change in present value in relation to the time period.



For the CRM project Big Web knew they had to contact a part-time programmer. They estimated the contact would be made for at least 1,00,000 Taka made at the start

of the year till the end. The additional income was estimated to 20,000 Taka in the first three months, 60,000 Taka in the following six months and 90,000 in the last three months. I did the Net Present Value calculation similar to the previous project and also made a graph same as before.



Subsequently, Big Web predicted that for implementing the ERP project they had to hire and train a web designer. The training would cost them an initial investment of 15,000 Taka. Additionally, the web designer had to be paid 20,000 Taka per month in the first 3 months and eventually increase it by 5,000 Taka afterwards. The additional income is estimated to be 40,000 Taka for the first 5 months eventually doubling up to 80,000 Taka for the following months in 2017. As before, I did an Net Present Value calculation and drew a graph.

Finally, to sum it all up , I did made a comparison graph between the three projects by combining all the data.

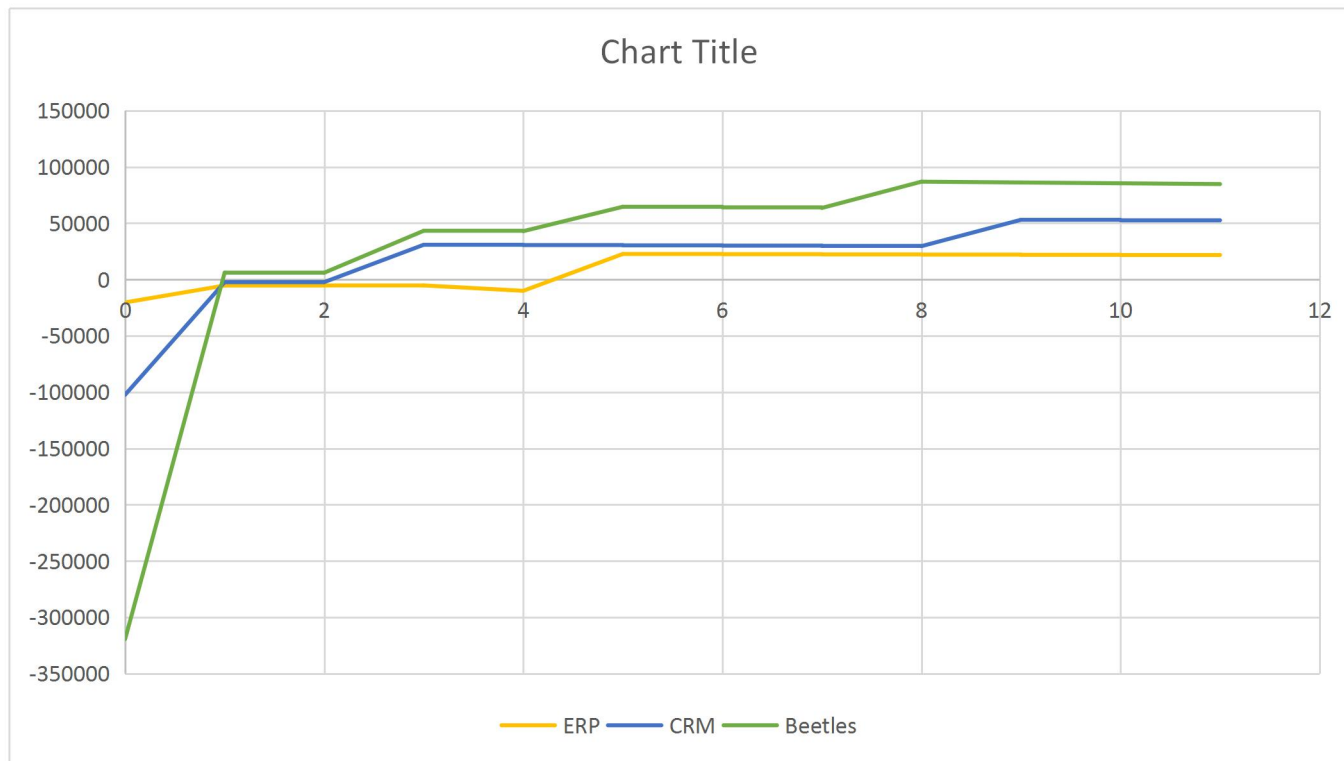
5.9 Findings

Firstly, the Beetles project will have a huge initial investment so the return will have to also be great to make up for it. Fortunately, Beetles client also paid very high premium for their services. The present value gets positive starting from the 2nd month. Eventually getting a Net Present value of 314471.5271 Taka. However, the initial investment also meant very high risk as the company would be in terrible position if the companies failed to subscribe.

Secondly, the CRM project also will have a bulk investment at start but will not be so high compared to 'Beetles'. However, the payment for CRM is also a little slower. The present value goes positive only in the 4th month. Although, in the end this projects also yields a positive NPV of 232097.8627 Taka. This project also has a great risk but much less than the 'Beetles' project.

Thirdly, The ERP project has a low cost for investment as Big Web only needs to pay for salary and training in the first month. On the other hand, Big Web needs to pay an additional salary for the rest of the months. The income of the ERP project is very stable and modest compared to the other two. But, as its investments are also lower it eventually also yields a positive NPV of 108587.4217 Taka. A point to note that this investment has the lowest risk of all three as funds could be pulled during any of the months.

Finally, The graph shows the comparison of the three projects. As mentioned before, we can see, 'Beetles' starts at the very bottom with its highest investment followed by CRM and finally the meager investment of the ERP project. We can also see the steep line on how 'Beetles' climbed indicating their high yield, CRM project has a lower yield but the ERP project has the lowest. In fact, it takes 5 months for ERP to have positive NPV yield.

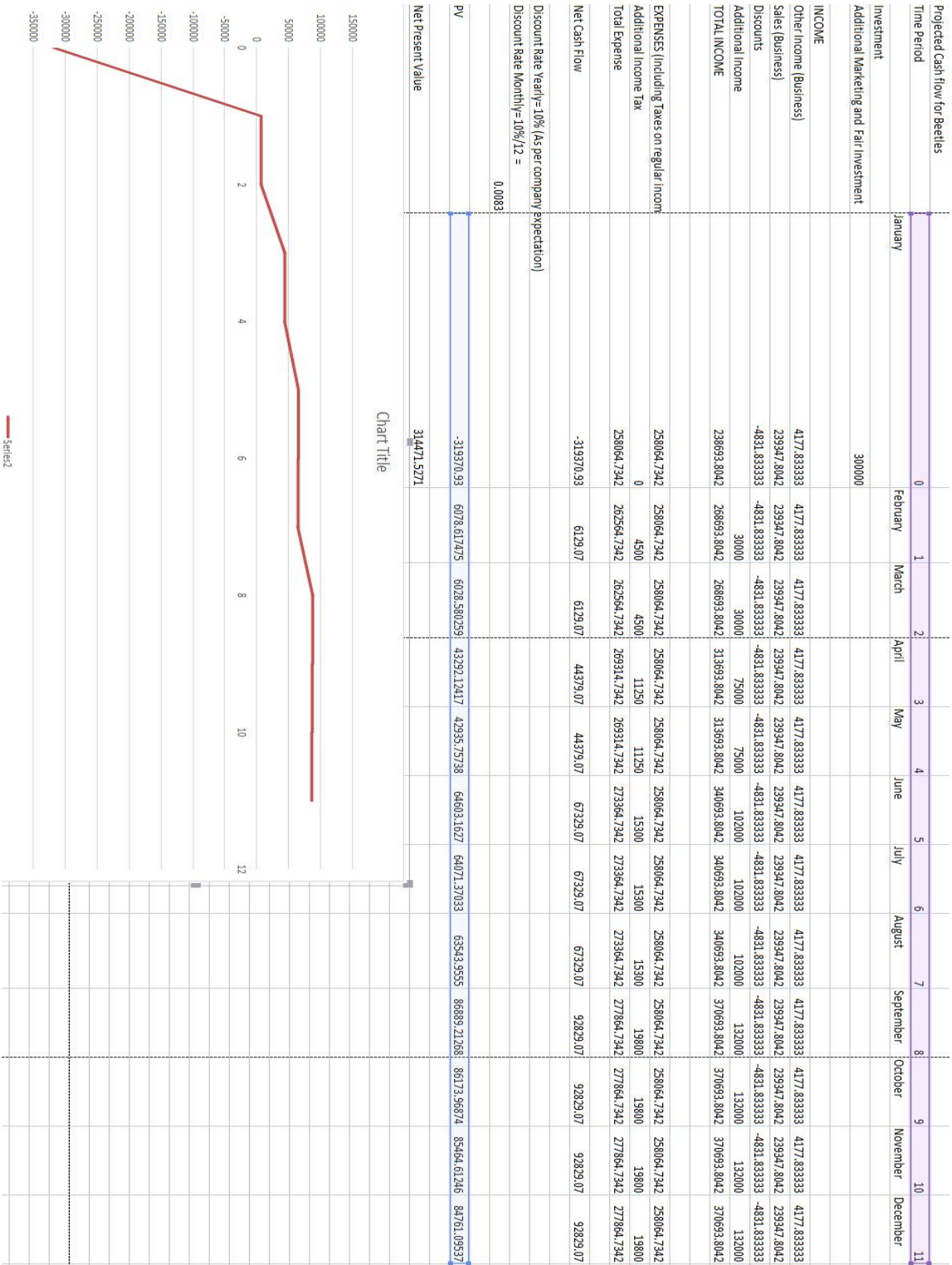


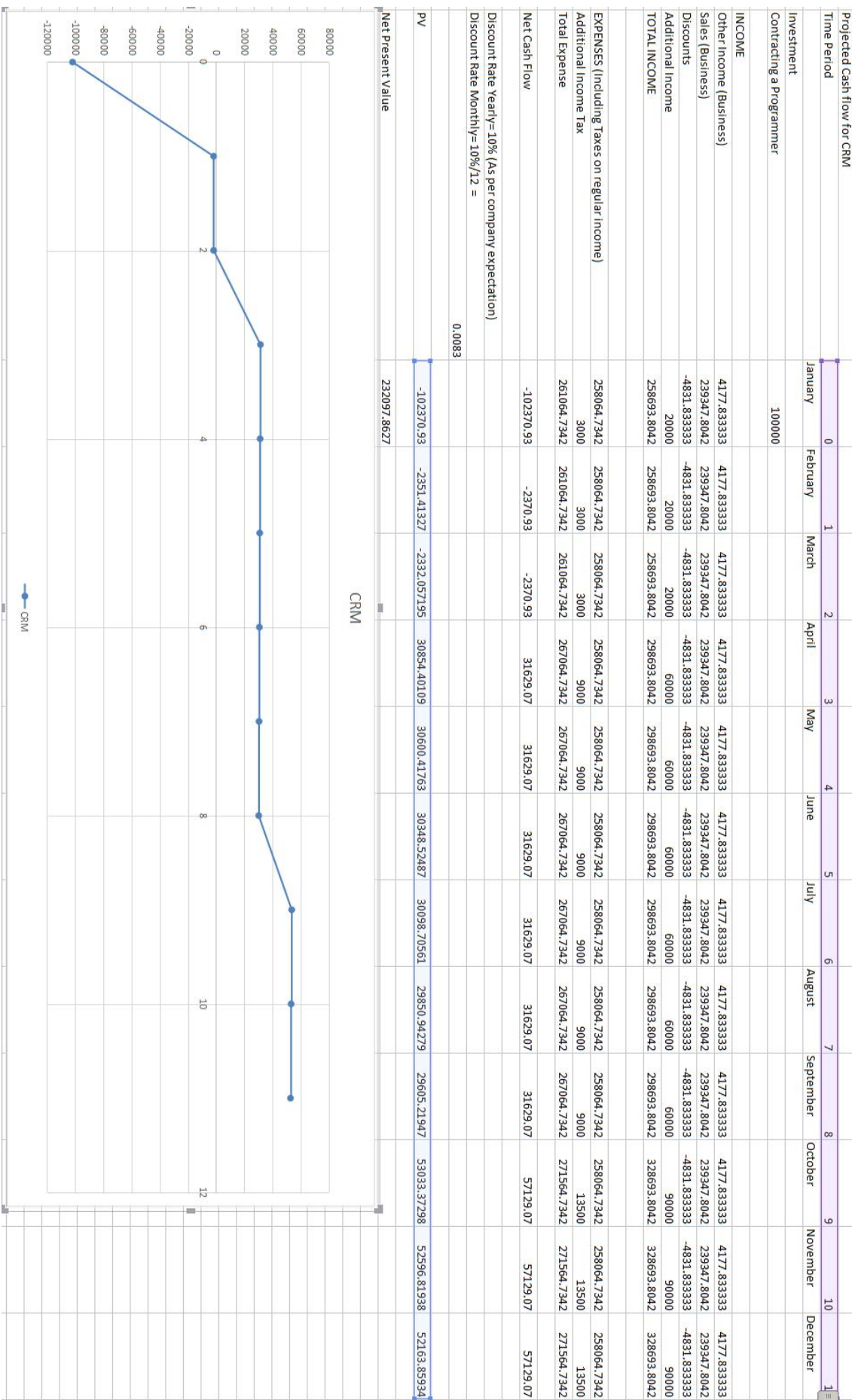
5.10 Conclusion

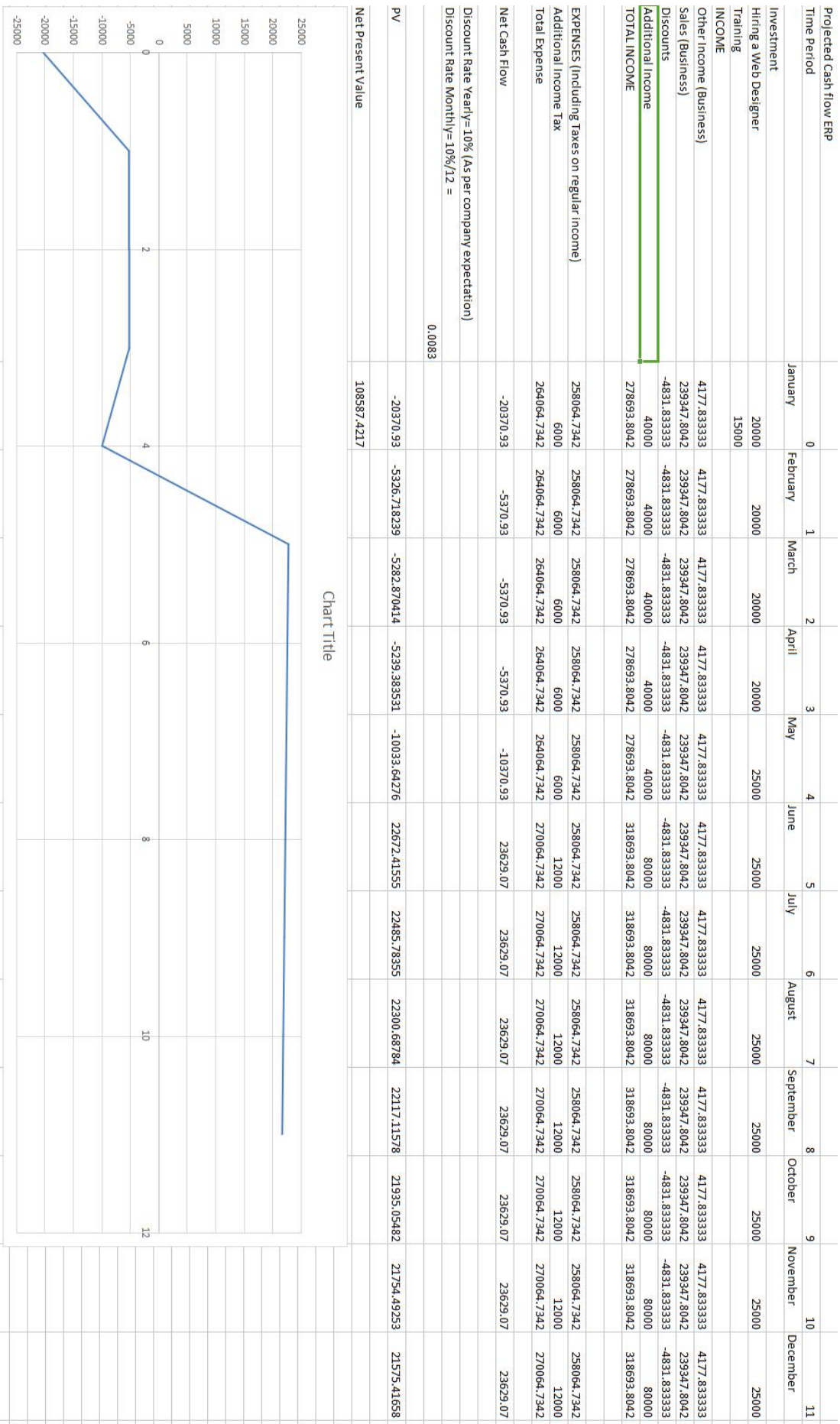
My hypothesis was proved as 'Beetles' indeed had the highest yield with the most net present value among the three projects. However, this comes with the fact that beetles also possess the highest risk among the three projects. If the projects were not mutually exclusive, it would be recommended for Big Web to take all three projects. Unfortunately, due to lack of manpower and management it is impossible for the company to take all three projects. Ultimately, even though 'Beetles' has the highest yield among the three, it would be upon the company to decide which project to implement. If the company has high risk-aversion they will take the ERP project. On the other hand, if the company is satisfied to take higher risk for higher reward they will take the 'Beetles' project. And if the company's policy is somewhere between they will take the CRM project. This project proves one of finance's core ideologies, the risk/return trade-off, 'Just as risk means higher potential returns, it also means higher potential losses.'

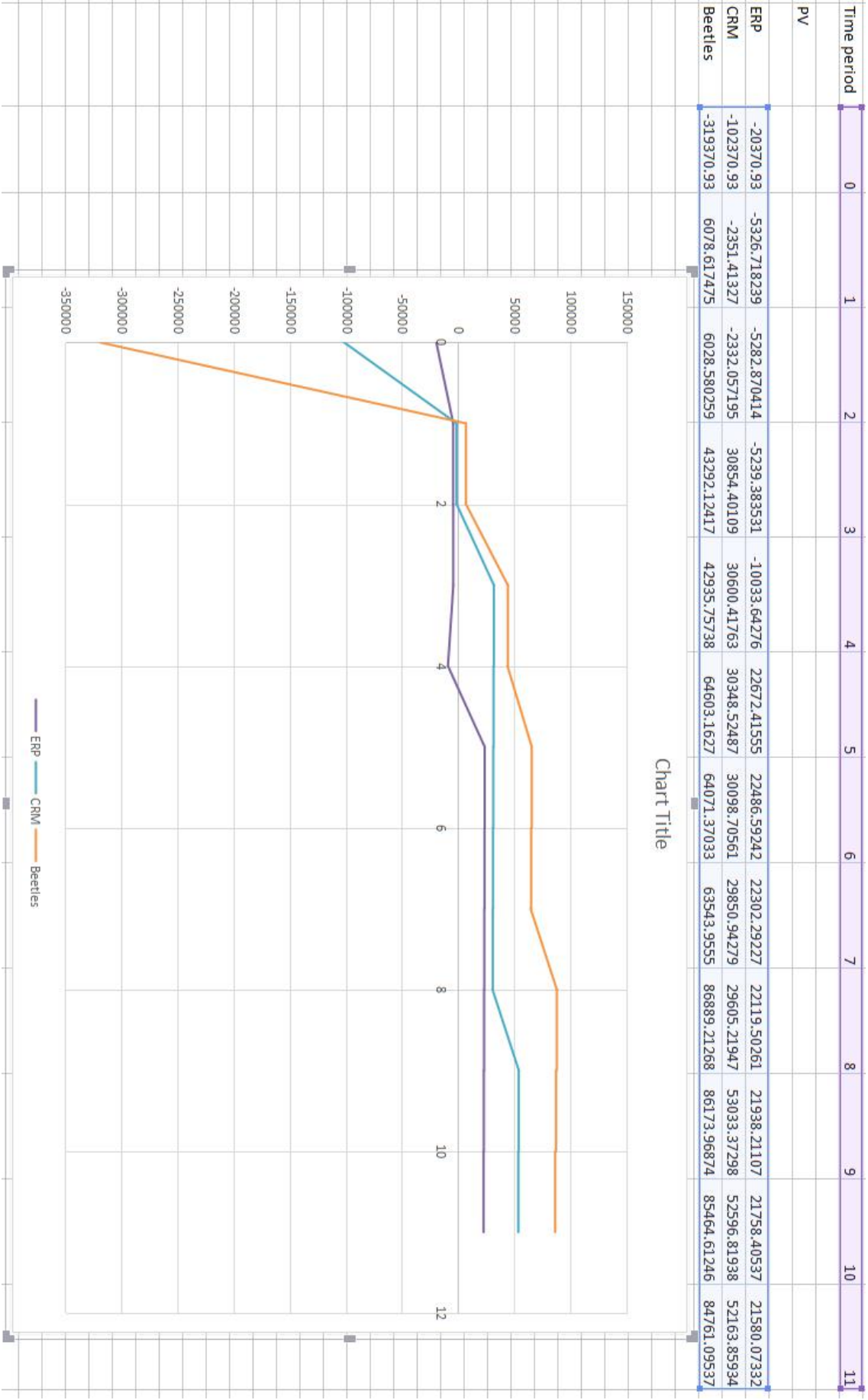
Appendices

Appendix-A









Projected Cash flow for Beetles		
	Average Income statement (monthly)	
	INCOME	
	Other Income (Business)	4177.833333
	Sales (Business)	239347.8042
	Discounts	-4831.833333
	TOTAL INCOME	238693.8042
	EXPENSES	
	Advertising (Business)	4191.666667
	Auto & Transport	3702.833333
	Billing & Rental	10508.7775
	COGS	5106.833333
	Fees & Charges:Bank Fee	397.2727273
	Food & Dining	.....
	Food & Dining:Restaurants	.....
	Utilities (Business)	.....
	Meals & Entertainment (Business)	.....
	Misc. Expense (Business)	.....
	Office Expenses (Business)	.....
	Salary Expense	.....
	Salary Expense:Employee Benefit	.....
	Maintenance Expense	.....
	Subscription	.....
	Tax	.....
	Postage and Delivery (Business)	.....
	Prof and Legal Fees	.....
	
	
	
	
	TOTAL EXPENSES (Including Taxes and I	258064.7342
	Net profit (loss)	-19370.93

Profit and Loss Statement - 2016	
1/1/2016 through 12/31/2016 (in Bangladesh Taka) (Accrual Basis)	
Category	1/1/2016- 12/31/2016
INCOME	
Uncategorized	0
Other Income (Business)	50,134.00
Sales (Business)	2,880,880.65
Discounts (Business)	-57,982.00
TOTAL INCOME	2,873,032.65
EXPENSES	
Uncategorized	0
Advertising (Business)	50,300.00
Auto & Transport	44,802.00
Billing & Rental	126,105.33
COGS	61,282.00
Computer Expense	27,590.00
Consultant Hire	300,000.00
Entertainment	30,000.00
Fees & Charges	
Fees & Charges:Bank Fee	5,290.00
TOTAL Fees & Charges	5,290.00
Food & Dining	
Food & Dining:Restaurants	3,068.00
TOTAL Food & Dining	3,068.00
Maintenance Expense	5,200.00
Meals & Entertainment (Business)	125,900.00
Misc. Expense (Business)	13,719.00
Office Expenses (Business)	8,478.00
Postage and Delivery (Business)	95
Printing & Stationary	7,043.00
Prof and Legal Fees	67,248.00
Salary Expense	1,788,100.00
Salary Expense:Bonus	180,000.00
Salary Expense:Employee Benefit	4,290.00
TOTAL Salary Expense	1,972,390.00
Subscription	17,600.00
Tax	44,242.48
Travel (Business)	26,000.00
Utilities (Business)	171,982.00
TOTAL EXPENSES	3,108,334.81
OVERALL TOTAL	-235,302.16

Balance Sheet - As of 12/31/2016	
As of 12/31/2016 (in Bangladesh Taka) (Accrual Basis)	
Account	12/31/2016 Balance
ASSETS	
Cash and Bank Accounts	
City Bank	9,342.00
Exim Bank	428,980.54
Petty Cash	1,499.00
TOTAL Cash and Bank Accounts	439,821.54
Other Assets	
Arnob Bahar Uddin	0
Asset	189,645.00
chevron	0
Customer Invoices	1,042,104.74
Customer Invoices 2	801,644.60
Kamrul Islam Shahin	0
Majharul Anwar	12,000.00
PayPal	-7,605.33
Paypal 2	7,900.00
Ruhul Anwar Withdrawal	65,000.00
TOTAL Other Assets	2,110,689.01
TOTAL ASSETS	2,550,510.55
LIABILITIES & EQUITY	
LIABILITIES	
Other Liabilities	
Sales Tax	0
Accounts Payable	18,042.00
Liability	0
M.H Global Trading	1,796,477.00
Md Muqeet Halim	131,200.00
Md Najibul Huq	0
Monzur H Chowdhury	0
MPSOL	241,050.56
Parvej Bepary	100,000.00
TOTAL Other Liabilities	2,286,769.56
TOTAL LIABILITIES	2,286,769.56
EQUITY	263,740.99
TOTAL LIABILITIES & EQUITY	2,550,510.55

Appendix-B

Referencing

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